When will summer return?

Description

It often seems that summer starts hot and sunny but by the time the main holiday period begins, the rain has set in … it is disappointing and frustrating that the weather doesn't always live up to our hopes, as witnessed in the last couple of weeks.

So, when will summer come back? Well, if you have read some media reports, you may think that August – the last month of meteorological summer – will be dominated by hurricanes or continual deluges. Attention-grabbing headlines may attract interest but they don't inform readers about what the rest of summer may have in store.

To understand what the rest of the month may hold, let's look at the weather situation now. After some hot spells in June and early in July, the UK's weather is currently being dominated by a series of low-pressure systems, steered our way by the jet stream, which is sitting across the UK at present, rather than being positioned further north. Sadly, this relocation of the jet stream has coincided with many people taking holidays in the UK.

Laura Paterson is a Chief Forecaster with the Met Office. She said: "During the summer we would hope that the jet stream might be positioned well to the north of the UK, which brings an increased chance of warm, sunny weather. However many years defy this hope and, as at present, we end up with the jet stream shifted further south, guiding low-pressure systems right across us, rather than steering them to the north of Scotland."

Will this situation persist? Well, indications are that until the middle of next week the weather will remain changeable – although parts of the country may see some improvement over the weekend, particularly across the south on Sunday, when some sunnier, drier conditions are on the cards. A further improvement may come to pass later next week but this is still quite a long way off and so confidence levels aren't too high. This is especially the case, since the improvement may be influenced by the remnants of tropical storm Emily – which may actually help to nudge the jet stream further north.

After that it's difficult to give too many details, but it looks like the second half of August may bring finer weather than the first half, especially for southen parts of the UK. This means that most of us will see some sunshine, but there is still likely to be some rain and showers in the forecast.

With many people on holiday, tourists often wonder about the weather during their vacation. Andrew Stokes, VisitEngland's Director said: "Whatever the weather there is an outstanding range of quality destinations and attractions on offer and with the ease and convenience of holidaying at home, Brits are discovering more of England and driving the economic benefits of tourism across the country."

Alex Deakin is a presenter with the Met Office. He said: "To a fair extent the outlook for the rest of August depends upon your philosophical bent and whether your rain gauge is half full or half empty. Pessimists may see rain in the forecast and assume that it's going to be a washout: optimists see brighter periods in the forecast and make the most of it. However, the reality is that during the unsettled

periods there will be brighter spells, which, with the strength of the August sun, could feel very pleasant.

“Despite the headlines it is certainly not all doom and gloom, and whatever the weather, smart people use their smart phones and plan their days and activities around the up to date information from the Met Office weather app.”

You can keep up to date with the weather using our forecast pages and by following us on Twitter and Facebook, as well as using our new mobile app which is available for iPhone from the App store and for Android from the Google Play store.

Date Created
August 2017

Torrential monsoon rains wreaking havoc across parts of southern Asia

Description

Torrential monsoon rains over the last seven days have reached life-threatening levels for communities south of the Himalayas from Nepal to Bhutan and northern India to Bangladesh.

Severe floods and landslides have wrought havoc. Already across the affected region communities have faced tragedy, including: loss of life; thousands of homes submerged; extensive crop damage; as well as collapsed bridges and blocked roads.

Further heavy rain is forecast over the next few days and this will extend the zone of flooding downstream to communities lining those major rivers which flow from the Himalayas.

Nick Silkstone is a Met Office forecaster working in the Global Guidance Unit. He said: “The region between the Himalayas and the Bay of Bengal is bisected by some of the world’s great rivers, such as the Brahmaputra and the Ganges, which drain the region normally taking water safely to the sea.

“Even though these are some of the world’s mightiest rivers the forecasts suggest even these giants are going to struggle with the amount of pressure these systems are currently facing.

“Global flooding indicators, such as GLOFAS, are indicating high probabilities of river flows that are only anticipated once every two decades in many of the region’s major rivers, giving an early warning of a significant event to come in the next week.”

There are already reports of extensive loss of farmland due to the flooding, and agencies are reporting waterborne diseases proliferating in flooded areas.

The monsoon is a natural part of south Asia’s weather, but this year rainfall in some areas has been over four times greater, when compared with the average between 1981–2010.

Clare Nasir is a weather presenter and meteorologist with the Met Office. She said: “The monsoon brings life-giving rains to the region, but the conditions in some years can be very cruel. Extensive rainfall can be more concentrated in some parts than others. This year, the north region has received much more rain than other parts of India.”

With further rain forecast this coming week and a lag time from last week’s rain reaching communities downstream, the risk of extensive flooding continues.

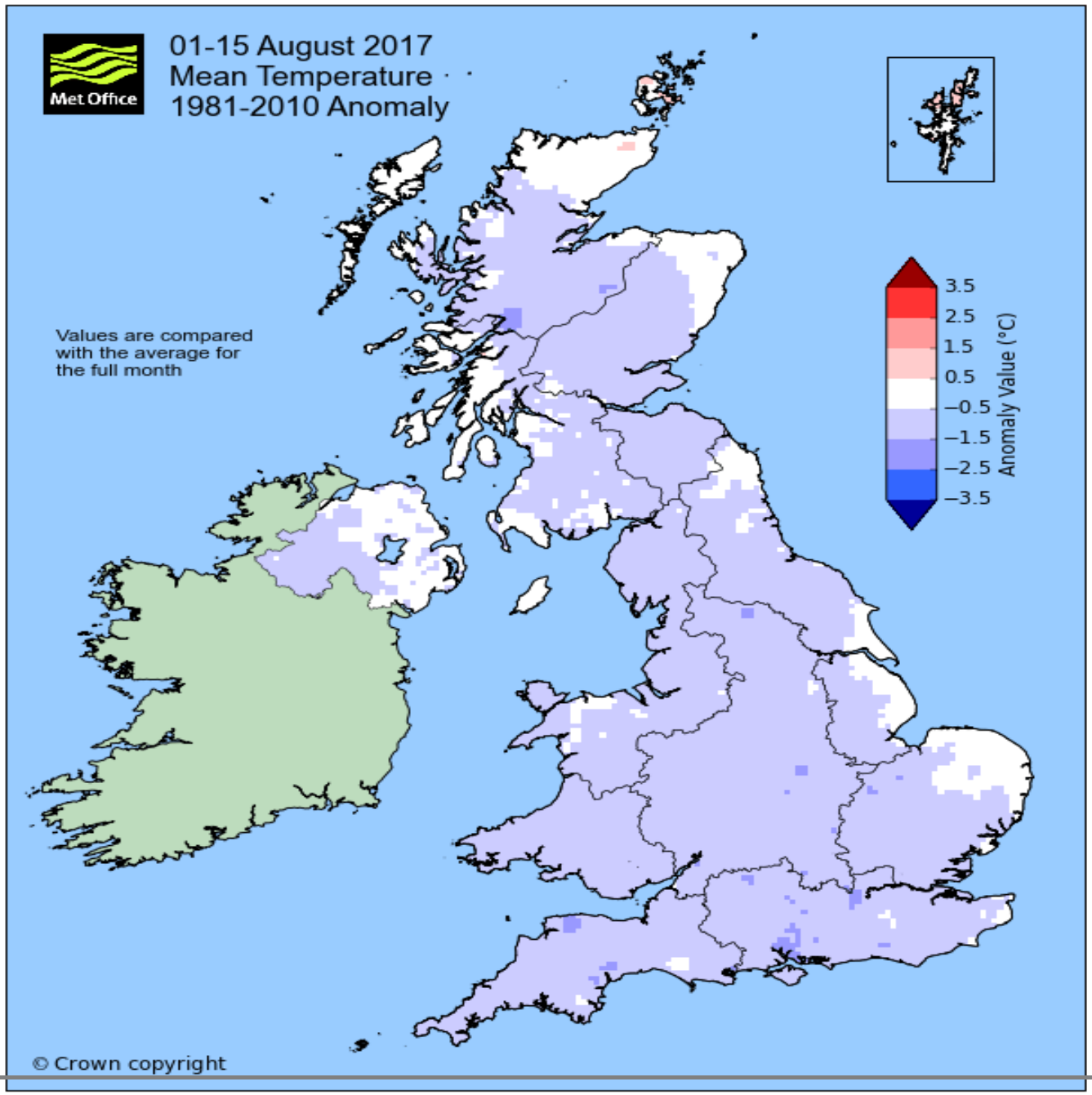
Date Created
August 2017

Jet stream brings cool and changeable start to August

Description

After an unsettled and cool end to July, August has continued in a similar vein. Many places have been showery and cool so far, with a southward-shifted jet stream to blame. This has directed areas of low pressure, which normally skirt to the north of the UK in summer, to instead move across the country.

In between spells of rain or showers brought by these low pressure systems, there have been some drier, brighter days and sunshine amounts have been close to normal. However, temperatures have been a little disappointing, with no locations recording a temperature in excess of 25 °C up to 15 August.



about 1

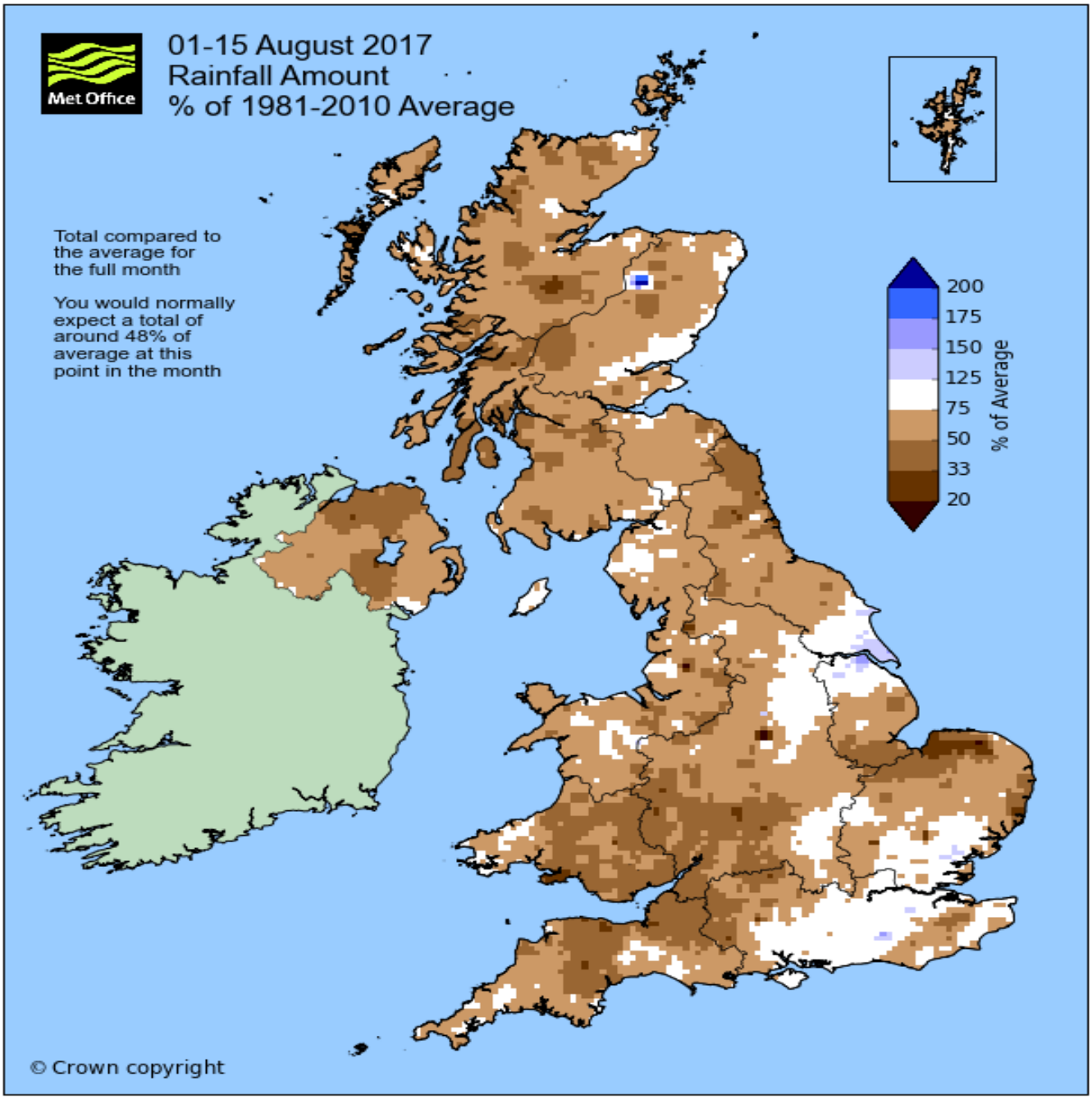
e

ures

In

terms of rainfall, many places have seen more than half of the whole-month average already, with locations around the Humber and across parts of central southern and south-east England getting close to their month average. Up to 15 August, the UK has received 60% of the whole-month average for rainfall. Looking back over the last ten years, several Augusts have been wet over large parts of the UK, so the month does have a tendency to disappoint those looking for dry weather.

You can read weather summaries of previous months and seasons for the UK here.



1-15 August 2017 provisional figures	Mean temp (°C)	Rainfall (mm)	Sunshine (hours)

	Actual	Diff to avg(°C)	Actual	% of avg	Actual	% o
UK	14.1	-0.8	53.9	60	79.6	49
England	15.2	-0.9	44.4	64	86.3	47
Wales	14.1	-0.9	61.8	57	75.7	45
Scotland	12.5	-0.5	67.7	58	70.1	52
N Ireland	13.8	-0.5	53.8	55	76.0	56

For the rest of August, it looks like the weather may settle down during next week, bringing some longer periods of dry weather with temperatures also recovering. However, low pressure is likely to bring further spells of wet and occasionally windy weather later this week and early next week.

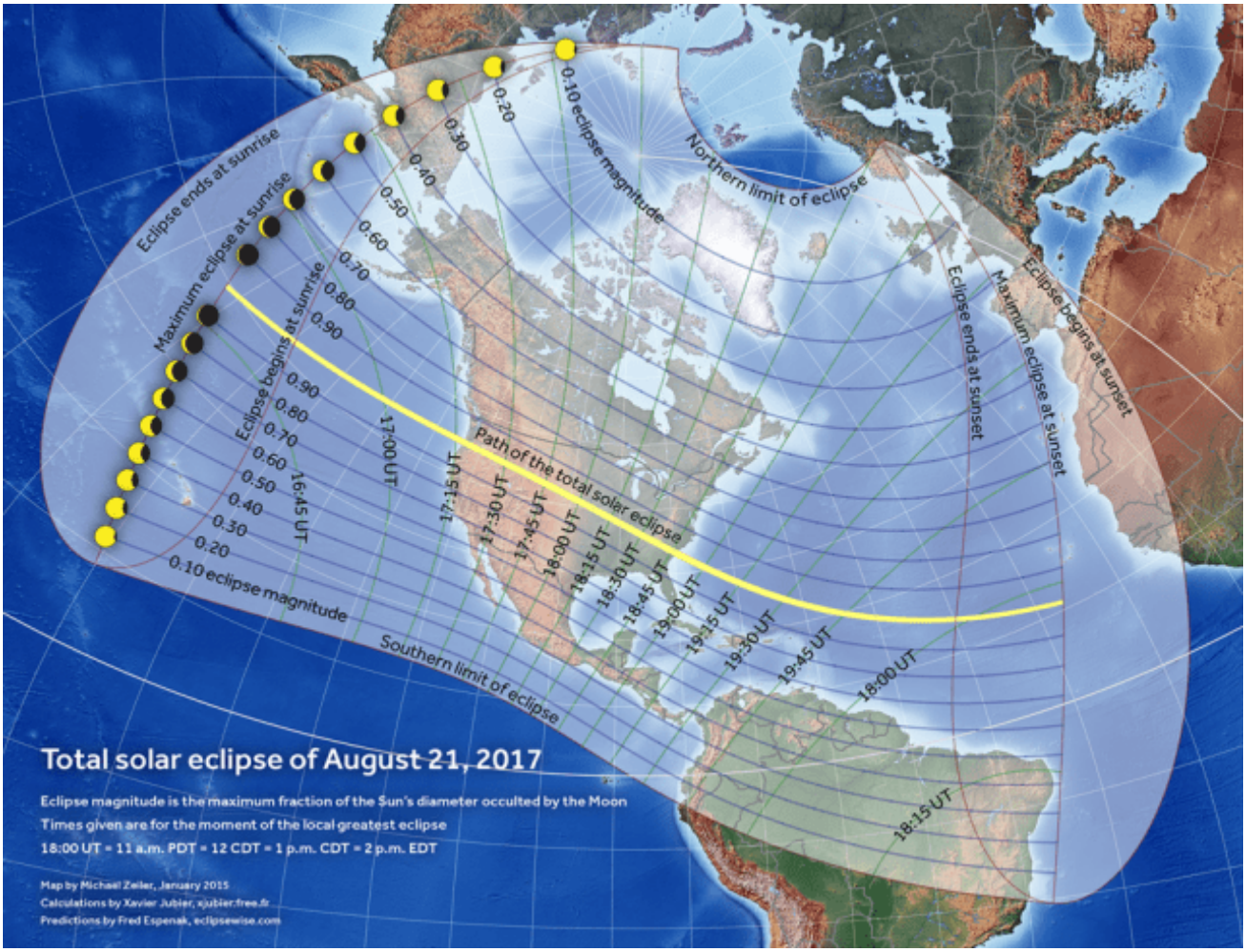
You can keep up to date with the weather using our forecast pages, on our popular mobile app which is available for iPhone from the App store and for Android from the Google Play store and by following us on Twitter and Facebook, as well as using.

Date Created
August 2017

US total solar eclipse – the most photographed event of all time?

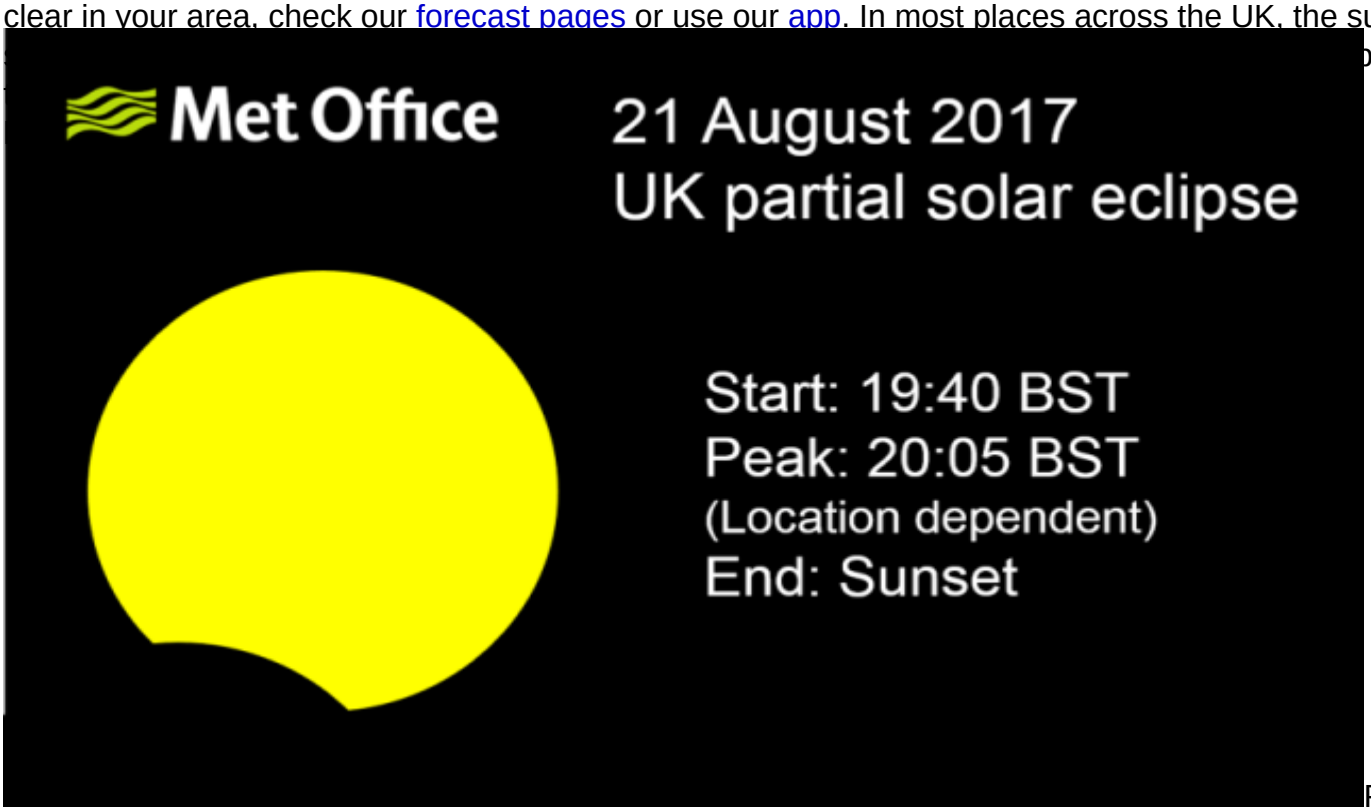
Description

Today, the path of a total solar eclipse will move across continental USA, an event predicted to be the most photographed of all time. The eclipse occurs as the moon passes between the Sun and the Earth, casting a 70-mile wide shadow and moving across the Earth's surface at an average speed of 1,651 mph. It will take the shadow a total of 90 minutes to travel across from Oregon to South Carolina, moving over an area home to 12.5 million people. Outside this path of totality, the entirety of North America will still witness an impressive partial solar eclipse; resulting in the most widely viewed solar eclipse since the invention of smart phones. It is this fact that has led experts to predict today's eclipse to be the most photographed event of all time, dependent on the weather.


Total solar eclipse of August 21, 2017
Eclipse magnitude is the maximum fraction of the Sun's diameter occulted by the Moon
Times given are for the moment of the local greatest eclipse
18:00 UT = 11 a.m. PDT = 12 CDT = 1 p.m. CDT = 2 p.m. EDT
Map by Michael Zeiler, January 2015
Calculations by Xavier Jubier, xjubier.free.fr
Predictions by Fred Espenak, eclipsewise.com
Path of the total solar eclipse
Northern limit of eclipse
Southern limit of eclipse
0.10 eclipse magnitude
Eclipse ends at sunrise
Maximum eclipse at sunrise
Eclipse begins at sunrise
Eclipse ends at sunset
Maximum eclipse at sunset
Eclipse begins at sunset
16:45 UT
17:00 UT
17:15 UT
17:30 UT
17:45 UT
18:00 UT
18:15 UT
18:30 UT
18:45 UT
19:00 UT
19:15 UT
19:30 UT
19:45 UT
The yellow line shows the eclipse's path of totality

Unfortunately, the eclipse will barely be visible from the UK, with the moon's edge blocking just a small fraction of the sun's surface. The eclipse will first become visible at around 19:40 BST, before peaking between 19:55 and 20:10, dependent on the location and the weather. To see whether skies will be

clear in your area, check our forecast pages or use our app. In most places across the UK, the sun will



Past and present, solar eclipses have led to some very important scientific discoveries, including the discovery of helium to the confirmation of Einstein's theory of general relativity. A new video on the Met Office's Learn about Weather YouTube feed explores a few of the most significant solar eclipse events.

Further studies

Despite observing eclipses for thousands of years, there is still a lot to learn from them. During today's eclipse, NASA will study the reaction of the ionosphere to the sudden drop in solar radiation and temperature. The ionosphere is a thin layer of the Earth's atmosphere, ionised by radiation from the sun. Additional observations will explore features of the sun's corona, photographed for the first time during a solar eclipse 166 years ago. Monitoring the sun's corona is an important aspect of space weather, because it is the source of coronal mass ejections. Ground-based and satellite imagery now replicate the effect of a solar eclipse using an instrument called a coronagraph, enabling the Met Office Space Weather Operations Centre to monitor the sun's corona 24/7.

A coronal mass ejection (CME) is the large release of material from the sun's surface. These events are not visible to the naked eye, except in the rare case of a total solar eclipse. In the year 1860, astronomer G. Tempel sketched what he saw during eclipse totality, drawing what we know today to be a coronal mass ejection.

Comparison between G. Tempel's CME sketch from 1860 (left), with modern SOHO satellite's coronagraph imagery of a coronal mass ejection in July 2017

Currently, a large magnetically complex sunspot region AR2671 can be seen in the centre of the sun's visible disk. Therefore, there is a chance that a coronal mass ejection could occur. Be sure to check our space weather forecast and follow us on Twitter for further space weather updates.

Total solar eclipses happen somewhere in the world at an average rate of once every three years, but unfortunately you'll have to wait a while to see one from the UK. The UK's next *near*-total eclipse will take place in 2026 (96%), but a total eclipse will not be visible in the UK until 2090.

More information

NASA will be live-streaming the event this evening from 17:00 BST at www.nasa.gov/eclipselive

For more information on the eclipse and its significance to space weather, follow @MetOfficeSpace on Twitter.

Date Created
August 2017

How are temperature records measured?

Description

At the Met Office we maintain the UK's climate records and these are used to monitor our climate at a national and regional level. To ensure consistency, weather records are only used from weather observation sites with calibrated, standard instruments and carefully monitored exposure. Although some records have been broken by non-standard stations, these are not accepted as official records for this reason. Also, on rare occasions an extreme temperature is recorded at a weather station which is so at odds with readings from stations nearby that it will be discounted as unreliable.

How far do records go back?

Historical observations of our weather are stored by the Met Office, with individual station observations in our digital database going back to 1853, however there are historical paper records for earlier dates held in the National Meteorological Library and Archive.

When are temperatures officially recognised as a new record?

The historical observations are used for monitoring our climate and maintaining a set of official climate records for the UK. They are also used to highlight interesting facts about our weather and place current weather into historical context. But these arbitrary calendar dates, such as the recent August Bank Holiday, Christmas or Wimbledon, do not give a complete picture of seasonal or monthly extremes.

Each day real-time data is subject to preliminary quality control before it is released, such as cross checking against nearby stations. A record will not become official until thorough quality control has taken place on the data, which may take several months.

They may even be reviewed again at a later date to ensure they remain valid.

Historical records also undergo continual review. With millions of data points it is inevitable that the database contains very small proportion of questionable data.

Was it the warmest August bank holiday on record?

On Monday 28th August a maximum temperature of 28.2 Celsius was recorded at Holbeach. The highest temperature for the late August bank holiday in the digital archive was 28.3 Celsius at March (Cambridgeshire) on 27th August 1990. However this particular reading is considerably higher than all surrounding sites and therefore considered to be suspect. Therefore the August bank holiday of 2017 would be considered as the hottest bank holiday on record beating the value of 27.2 Celsius recorded at East Bergholt (Suffolk) in 1984.

It should be noted that this is a statistical quirk of the August bank holiday never having recorded a notable temperature extreme, and does not reflect a new national temperature record for the UK. We have seen higher temperatures later in the year than this. For example a brief heatwave in September 2016

saw temperatures reach 34.4 Celsius on 13th, and the highest temperature recorded in October for the UK was 29.9 Celsius on 1st October 2011.

For full weather extremes listings and historical records go the Met Office Climate section

Date Created
August 2017